

- d. *Rotation of Crops*.—Rotation with unrelated crops minimise favourable conditions for insect generation.
- e. *Time of Planting*.—Timeliness of planting to avoid a particular insect.
- f. *Time of Harvesting*.—Prompt harvesting and threshing avoid many opportunities for insect development.
- g. *Resistant Varieties*.—Some plants resist attack better than others; native plants are particularly resistant.
- h. *Clean Culture*.—Sanitation in garden, orchard, field, and farm.
- i. *Drainage*.—To remove conditions favourable to some insects.
- j. *Kind of Cropping*.—Avoid susceptible crops. Secure unfavourable conditions for insect generation.
- k. *Trap Crops*.—Planting in alternate rows specially attractive plants, to be easily removed and destroyed at a particular time to secure destruction of the insect pests.
2. MECHANICAL METHODS AND DEVICES.
- a. *Methods*.—Handpicking and jarring of foliage.
- b. *Protectors*.—Screens. Insect-proof packing.
- c. *Mechanical Traps*.—Devices for entrapping and collecting.
3. INSECTICIDES.
- a. *Stomach Poisons*.—For mandibulate insects.
- b. *Contact Insecticides*.—Sucking and soft-bodied insects.
- c. *Fumigants*.—For enclosed spaces.
- d. *Soil Insecticides*.—Poisons, contact insecticides: often kill by asphyxiation.
- e. *Repellants*.—Materials which are distasteful.
- f. *Combinations*.—Insecticides and Fungicides together for more than one kind of pest at the same time.

Aberrations nouvelles de Coccinelles.

Par J. A. LESTAGE, Membre Soc. Entom. Belg., Assistant de la Station Biologique d'Overmeive, Belg.

HIPPODAMIA 13-PUNCTATA, L.

ab. *tonnoiri*, n.ab., Elytres avec 2 points: 1, 6.

ab. *beffai*, n.ab., Elytres avec les points: 1, 2, 3, 4, 6, $\frac{1}{2}$.

ab. *guilleaumei*, n.ab., Elytres avec les points: 1, 2, 3, 4, 5+6, $\frac{1}{2}$.

HIPPODAMIA 7-MACULATA, Degeer.

ab. *scutellata*, ab.n., 1+3+ $\frac{1}{2}$, 2, 4, 5, 6.

ab. *trifasciata*, ab.n., 1+2+3+ $\frac{1}{2}$, 4+5, 6.

ab. *bifasciata*, ab.n., 1+3+ $\frac{1}{2}$, 2, 4+5, 6.

ab. *bioculata*, ab.n., 1+3+ $\frac{1}{2}$, 2, 4+5+6.

ADONIA VARIEGATA, Goeze.

ab. *bonaerti*, ab.n., Elytres avec les points: $\frac{1}{2}$, 4, 5, 6, et 1 point supplémentaire entre les points, 5 et 6.

ANISOSTICT 19-PUNCTATA, L.

ab. *trijuncta*, ab.n., $\frac{1}{2}$, 2+4+5, 3, 6, 7, 8, 9.

ab. *riparia*, ab.n., $\frac{1}{2}$, 1, 2, 3, 4+5+7, 6, 8, 9.

ab. *campiniensis*, ab.n., $\frac{1}{2}$, 1, 2, 3, 4, 5+7+9, 6, 8.

ab. *averbodensis*, ab.n., $\frac{1}{2}$, 1, 2, 3, 4, 5+7, 6+8, 9.

- ab. *simplex*, ab.n., $\frac{1}{2}+3$, 1, 2, 4, 5, 6, 7+8, 9.
 ab. *frenneti*, ab.n., $\frac{1}{2}+3$, 1, 2, 4+6, 5, 7, 8, 9.
 ab. *sinuata*, ab.n., $\frac{1}{2}$, 1, 2, 3, 4+5+7+9, 6, 8.
 ab. *woluwensis*, ab.n., $\frac{1}{2}$, 1, 2, 3, 4+5+7+9, 6+8.
 ab. *juncorum*, ab.n., $\frac{1}{2}$, 1, 2, 3, 4, 5+7+9, 6+8.
 ab. *schoutedeni*, ab.n., $\frac{1}{2}$, 1+3, 2, 4+5+7, 6+8, 9.
 ab. *rubi-claustri*, ab.n., $\frac{1}{2}+3$, 2, 4, 5+7+9, 6+8.

ADALIA 10-PUNCTATA, L.

ab. *lemanii*, ab.n., Elytres avec la moitié inférieure entièrement noire et la moitié supérieure rouge sauf un gros point noir situé au milieu du bord antérieur de chaque élytre.

(Forme dédiée à Mr. G. B. C. Leman bien connu par ses recherches sur les Coccinelles).

Toutes les formes décrites ci-dessus proviennent de Belgique.

SCIENTIFIC NOTES AND OBSERVATIONS.

"DIVERGENCE OF CHARACTER."—In Wallace's *Darwinism* occurs the following paragraph: "It is no doubt due to the same cause (struggle for existence) that some butterflies, on small and exposed islands, have their wings reduced in size, as is strikingly the case with the small tortoise-shell butterfly (*Vanessa urticae*) inhabiting the Isle of Man, which is only about half the size of the same species in England or Ireland." Is this a real fact? Are the Isle of Man specimens "half the size" of normal specimens? If so some of us would like to see these dwarfs; they could be exhibited at our London societies meetings.—H.J.T.

NOTES ON COLLECTING, etc.

AUTUMN CAPTURES.—A fine specimen of *Manduca (Acherontia) atropos* was taken at Godalming, Surrey, on September 27th, 1924, resting on a telegraph pole some 15 feet up. It harmonised so exactly with its surroundings, that had its profile not been seen against the skyline it would have been overlooked. On September 8th, 1923, a specimen of *Plusia festucae* was taken at Folkestone, sitting on a gas-lamp at night, no doubt the unusual occurrence of a second brood specimen, which is especially rare in the south. From September 12th to September 19th of this year, 18 specimens of *Catocala nupta* were taken in the London area, all on tree trunks. One on the Bayswater Road, four in Hyde Park, and thirteen in Regent's Park. This species appears to have been very common generally this year, but I was not aware that it abounded to this extent in the near London district.—H. B. D. Kettlewell, Pageites, Charterhouse, Godalming.

THE SEASON.—We have had most awful weather, raging gales of wind and torrents of rain. To-day, however, is fine so far (11 a.m.), but there are too many clouds about. I spent July and August at a place called Termonfeekin, about four miles north from Drogheda and half a mile from the sea coast. It is a very out of the way place, but there is a beautiful strand extending from the mouth of the Boyne to Clogher Head, and capital sand-hills. I got a good many insects, but